



1008S

Flow Indicator-Totalizer

Masibus' Model 1008S has features and performance you will find only in high end flow computers, like high accuracy, high resolution, PT compensation and fast sampling to measure and totalize with precision even fast changing flow rates. The unit has a 5-digit flow rate display and an 8-digit batch total/ integrated total display with rollover counts. All Totalized data and configured parameters are stored in non-volatile memory and retained during power off and power disruptions.

Model-1008S has optional four relays, 2 for flow rate and 2 for batch total, the flow rate relays can be setup for Hi/Lo Alarm and the batch total relays for Pre and Final batch total. 1008S also has optional four digital inputs to operate the Totalizing function remotely. RS485 and Flow rate Re-transmission option allows easy interface with PLC/DCS/SCADA systems. A selectable square root extractor function enables compatibility with DP transmitters without built-in square root extractor.

Model 1008S is field selectable for mA/V DC or frequency flow rate input signal, for 4-20mA 2 wire transmitter it has a 24V DC transmitter supply as a standard, the input signal can be scaled from 0 to 30000 engineering value and the time base is selectable from Sec/Min/Hour/Day, for frequency input the K factor is user programmable, the unit also has option to accept 2 more dc signals for pressure and temperature compensation for liquid/gas flow, saturated steam or super heated steam measurement.

Additional features built-in are Programmable zero cut-off rate, totalized unit pulse output, five segment linearization, digital filter and password protection for reset of total and configured data.

Features

- Input selectable from current, voltage & frequency
- Square root extractor
- 5 Digit Flow rate & 8 digit Batch/ Integrated Total with rollover count
- Programmable K factor for Freq Input
- Programmable low/zero cutoff facility
- 8-digit totalizer with password protected resetting
- Programmable time base Day/Hr/Min/Sec
- Programmable zero flow rate
- Pulse output
- Mass flow measurement with additional Pressure and Temperature I/P
- Gas/ liquid flow measurement
 - Superheated steam flow measurement
 - Saturated steam flow measurement
- Options:
 - DI inputs for remote operation
 - Mass Flow Measurement
 - 4 Configurable relays for Flow/Batch
 - Retransmission output (Isolated)
 - RS485 serial communication (Isolated)

Applications

- Monitoring and controlling continuous and batch flow processes like:
 - Mixing operation in chemical/Pharma
 - Fuel consumption
 - Custody Transfer
 - Energy management
 - Batch Filling
- Receiver instrument for Turbine, PD & Magnetic pickup flow elements

TECHNICAL SPECIFICATIONS

Input		Output	
Input 1		Relay (Optional)	
Current	0/4-20mA	2 Relays	Programmable for Flow Rate or Batch Alarm
Voltage	0/1-5V DC	4 Relays	2 Relays Programmable for Flow Rate Alarm & 2 Relays Programmable for Batch Alarm
ADC Resolution	16 bits	Contact Type	C-NO-NC Single change over
Sampling Speed	10 Samples/Sec	Rating	250V AC/30V DC@2A
Input impedance		Retransmission (Optional)	
Current Input	250 Ω	Retransmission	Isolated 4-20 mA DC @ 500 Ω
Voltage Input	> 300K Ω	Retransmission Accuracy	0.25% of FS +1 count
NMRR	> 50dB	Serial Communication (RS485) (Optional)	
CMRR	> 100dB	Baud Rate (bps)	9600/19200, Programmable
Time Base Accuracy	100 ppm	Protocol	Modbus-RTU
Measurement Accuracy	0.025% FS [for Current / Voltage]	Data Pattern	N, 8,1
Polarity Protection	Provided	Transmitter Power Supply	24V DC ±5% @ 50 mA
Temp-co	100 ppm	Power Supply	
Frequency Input*	0-10KHz * Max. Pulse level<=24V. Min. pulse level > 5.0V	Power Supply	85-265V AC @ 50Hz (Standard) 24V DC ±10% (Optional)
Input 2 (Optional)		Power Consumption	<10 VA
Current	0/4-20mA	Isolation (Withstanding voltage)	
Voltage	0/1-5V DC	Between primary terminals* and secondary terminals**: At least 1500 V AC for 1 minute	
Measurement Accuracy	0.025% FS [for Current / Voltage]	Between primary terminals* and grounding terminal: At least 1500 V AC for 1 minute	
Purpose	Pressure/Temperature Compensation for Standard Vol. flow/Mass Flow	Between grounding terminal and secondary terminals**: At least 1500 V AC for 1 minute	
Input 3 (Optional)		Between secondary terminals**: At least 500 V AC for 1 minute	
RTD	100.0 – 235.0 °C	* Primary terminals indicate power terminals and relay output terminals.	
Resolution	0.1 °C	** Secondary terminals indicate analog/digital I/O and Communication O/P.	
Accuracy	0.25%	Insulation resistance: 50MΩ or more @ 500V DC between power terminals and grounding terminal.	
Digital Input (optional)		Physical	
No. of Channels	4 Nos.	Mounting type	Panel
Input Type	Dry Contact/Open Collector	Bezel size (mm)	96(H) X 96(W)
Exc. Voltage/Current	12V DC@10mA	Cut-out Dimension (mm)	92(H) X 92(W)
Input Function	Stop batch, Integration total zero, Start batch, Batch total zero	Depth with terminals (mm)	130
Display & Keys		Weight (gms)	500
Process Value	0.56" 5 Digit, 7 Segment RED LED	IP Protection	IP20
Total/Int. Value	0.4" 8 Digit, 7 Segment RED LED	Enclosure Type	ABS Plastic
Rate Indication Range	Range programmable 0-30000	Electrical Connection	2.5mm ² / Screwed
Totalizing Range	0-99999999	Standard Accessories	Mounting clamps – 2 nos.
Decimal Point	Adjustable	Environmental	
Resolution	1 Count	Operating Temperature	0 to 55 °C
Keypad	4 keys: Stop, Start, Escape & Enter	Storage Temperature	0 to 80 °C
Special Feature		Operating Humidity	30 - 95%RH (non condensing)
Batch / Integrated Total Reset	Front Key (Password Protected)	Warm-up time	>10 min
Time Base for Totalizer	Programmable (Day / Hr /Min / Sec)		
K Factor Function	Yes (Frequency I/P)		
Square Root Extraction	For Differential Pressure Transmitter		
Memory/Data storage	NVRAM/EEPROM. Data will not be lost when power off, can hold for 10 years		
Mass Flow Measurement	With Two extra compensating I/P for Pressure and Temperature		

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Model	Input Types	Digital Input	Power Supply	Communication	Relay	Retransmission O/P	Mounting	Type of Flow Measurement
1008S	X	X	XX	X	X	X	XX	X
C	4-20mA	N None	A1 85-265V AC	N None	N None	N None	PO Panel	N None (with single I/P)
D	0-20mA	Y Yes	A3 24V DC	2 RS485	2 2 Relays	Y Yes		PT PT Compensated liquid/ gas flow
E	1-5V DC				4 4 Relays			SS Saturated Steam Flow
F	0-5V DC							SH Super heated Steam
G	0-10V DC							
N	0-10 KHz							
S	Special*							

X - Specify from table
*Consult Factory